

THE BOSTON MEDICAL AND SURGICAL JOURNAL.

VOL. IV.]

TUESDAY, APRIL 26, 1831.

[NO. 11.]

I.

OBSERVATIONS ON THE INFLUENCE OF IMPERFECT SUPPLIES OF FRESH AIR, LONG CONTINUED, ON THE GENERAL HEALTH.

By WILLIAM WATSON, Esq., Surgeon, Wanlockhead.

FROM the experiments of Lavoisier, Davy, Allen and Pepys, and Dr. W. F. Edwards, we learn, that air containing a certain proportion of oxygen gas is indispensable to effect the requisite changes on the blood of the pulmonary artery; that in the course of successive respirations, the oxygen gradually diminishes, and that its place is supplied by variable proportions of carbonic acid gas; and that, in consequence of these changes in the air respired, frequent fresh supplies are requisite. It was also ascertained by Allen and Pepys, that when an animal breathes the same quantity of air without change, death ensues before all the oxygen disappears; and that when the same portion of air is respired until it can no longer effect the requisite changes, it still contains only 10 per cent. of carbonic acid.

In all the experiments of these observers, the animals were made to respire an atmosphere which was gradually becoming vitiated, until insensibility or fatal *asphyxia* took place; and no attention was paid to the question, how far an atmos-

phere not frequently changed is capable of supporting life, and what influence such an atmosphere exercises on the functions and health of the animal body?

This question, I think, may be illustrated, if not determined, by the situation of miners, who are under the necessity of following their avocations in places so remote from the general mass of the atmosphere as to be almost insulated; and where, of course, there is neither a regular ingress of atmospheric air, nor egress of the substance formed during respiration and combustion. In these places the air is so rapidly inhaled, that a considerable diminution of the quantity of oxygen must follow, and its place being supplied by an equal quantity of carbonic acid gas, the bulk remains unaltered. The carbonic acid, however, from its specific gravity, falls to the bottom of the mine, where its presence is indicated by a candle burning more obscurely than when placed at a greater height.

But carbonic acid is scarcely ever accumulated in such quantities as to affect the action of breathing, except in so far as that is connected with the process of oxidation and assimilation, and then its effects are very material; since all the nutritive particles, before they can be assimilated with the blood, must be submitted to the action of the

atmosphere through the medium of the lungs. "In this way," to use the words of one of our ablest philosophers, "respiration may be said to be carried into every part of the body." Since, then, a certain proportion of oxygen is so necessary for the due support of the animal system, and since it has been demonstrated by satisfactory experiments, that a medium, consisting entirely of oxygen, would excite the action of all the vital functions to such a degree as even to cause the extinction of life, it seems a natural inference, that the inhalation of a medium deprived of a part of its oxygen should be attended with very different results—namely, a loss of tone or debility in proportion to the quantity inhaled.

That this is really the case, is not only proved by the experiments above alluded to—but all the observations which I have made during a considerable number of years tend to strengthen my conviction of its truth.

In the year 1823, sixteen men were employed, during four months, in a mine where the deficiency of air was so considerable, that a candle would not burn for any length of time, except when the wick was made so open as to allow the greatest possible quantity of air to come in contact with the ignited part. The candle was placed generally in a sloping position. Notwithstanding the deficiency of air, none of the miners had any inflammatory complaints, but all complained of lassitude, debility, and drowsiness, particularly towards the end of each day's work, sixteen hours; and they all became gradually paler in complexion.

In 1824, an equal number of men were employed in the same mine, with nearly the same result.

Thirteen were quite free from any particular complaint,—one complained, for a few weeks, of a slight pain in the stomach,—the other two, for a few days, of pain in different parts of the body from obstructed perspiration.

In 1826, sixteen men were employed five months in a mine where the quantity of air was still smaller than in the former—still the miners were free from any particular complaint. Only one complained of shifting pain, from improper exposure when perspiring freely. In 1827, the same number of men were employed in the same mine for four months, and all remained free from complaint. Reasoning, then, from analogy, it seems fair to conclude, that a person placed in a medium where there is a considerable deficiency of oxygen must become less liable to inflammatory action, and that this non-liability will be in direct ratio to the length of time he is confined in such medium. At least, this is no speculation founded on mere conjecture, but supported, in my opinion, by the facts which have come under my own observation. From these, I draw the following inferences:—1st, That miners are not more liable to inflammatory complaints than any other class of the community. 2dly, That a majority of them, at least, in this district, remain free from any particular affection of the chest. 3dly, That hydrothorax among miners is rather a rare disease, only two cases having occurred to me in the course of fifteen years' practice.

With regard to the first of these conclusions, I may merely mention, that a majority of the inflammatory affections which have come under my notice, arose from exposure to sudden vicissitudes of weather, as

in the case of engine-keepers, lead-washers, carters, &c. ; and as to the second,—of sixteen miners, each sixty years of age or upwards, and still connected with the work, four have been invalided ; while the other twelve continue to follow their occupations as usual. The united ages of the miners amount to 329.

I may also observe, that from a professional observation of fifteen years in this mining village, I have been led to the conclusion, that phthisis is not more prevalent among the miners here, than among any other description of people who are constantly inhaling pure atmospheric air.

As a proof of this, during the above-mentioned period, cases have occurred as frequently among females as among males ; and even of the latter, there were several individuals who had never been employed in the mines at all—so that, with reference to this disease, the balance seems to be in favor of mining as an occupation ; the deaths having been, according to my computation, in the proportion of six miners to nine others. I infer from this, also, that the effect generally attributed to the inhalation of noxious vapor and fine mechanical particles, namely, the irritation of the mucous membrane of the bronchia, and the inflammation thereby induced, has been much overrated ; and that the conclusions drawn from this supposed effect are founded rather on analogy than on experiment or observation. The idea that fine mechanical particles may be suspended in the atmosphere, and, being inhaled along with that fluid, may produce the irritation alleged, I am inclined to receive with considerable distrust. Mechanical particles, to occasion

any serious injury, must be of such a magnitude as would preclude the possibility of their being retained in suspension ; and, on the other hand, such as from their extreme minuteness would admit of being so suspended, may either be inhaled with impunity, or must do their mischief in some other mode than the one assigned. It appears to me, therefore, that, if consumption does occur more frequently among miners than among some other classes of the community—a position which I think questionable—it must arise chiefly from the laborious exercise necessary in their daily avocations, which, by accelerating the current of the blood through the lungs, may occasion some injury to that delicate organ, especially if any part of the vascular system was predisposed to disease. But to this I would consider them no more liable than any description of laborers on the surface whose stated exercise is equally severe. I am aware that this view of the subject differs from that of many medical gentlemen of established name—yet it has not been hastily or carelessly adopted, but is founded on long observation and experience ; and, unless it can be invalidated by opposite experience, I flatter myself that the liberal and enlightened practitioner will hesitate to pronounce it altogether erroneous.—*Ed. Med. & Surg. J.*

II.

PHLEBITIS OF THE SAPHENA VEINS CURED BY COMPRESSION.

MAY 27, 1830.—A young man, æt. seventeen, was admitted into the Hôtel Dieu, who had been obliged to remain constantly in a

standing posture. He was of a feeble habit, and complained of pain and debility of the lower extremities. He had had diarrhœa for two days. This symptom soon disappeared, but the pains in the legs increased. Baths were employed without advantage. The continuance of the pain led to a more attentive investigation of the case; and on the 7th of June, upon examining the lower extremities, small and irregular enlargements, of a blueish color, were detected upon the course of both internal saphena veins. These enlargements were very painful on pressure, and did not disappear under the weight of the finger. The inguinal glands were not tumefied. There were no red streaks of the skin, indicative of any affection of the lymphatic system. The patient could not bend his knees without pain, on account of a slight swelling in the ham, which was supposed to depend upon enlargement of the glands of the part, from obstruction to the venous circulation. The pain did not run in the track of the nerves, and was not, indeed, present, except when the swelling was pressed upon, when it became very acute. There was little or no fever.

The case was now considered to be partial phlebitis of both saphenæ veins, and M. Recamier prescribed free doses of tartar emetic, which caused vomiting. No benefit was derived from this treatment, which, however, was scarcely continued long enough to enable any opinion to be formed of its efficacy. Compression was determined upon. Firm poultices of linseed were applied, and bound down by rather tight bandages.

The following day, the tumors on the veins were diminished in

size, and less pain was felt on pressure. There was an obvious amendment every day, and in a short time all traces of phlebitis had ceased. Compression was still, however, continued, as the pains in the legs had not entirely disappeared.

It is to be observed, that the pains continued some time after the tumors, which showed the character of the disease had diminished. The limbs at length recovered their strength and action, and the patient quitted the hospital entirely cured.

Journ. Complémentaire.

III.

PREGNANCY—NECESSITY OF SCRUTINIZING SUSPICIOUS ENLARGEMENTS OF THE ABDOMEN.

WE present the reader the following extract from a clinical lecture by Dr. Elliotson, because it contains some practical caution—refers to a mode of examination in such cases which was recommended in an article by Dr. Fisher, which was originally communicated for this Journal about a year ago, and subsequently copied into other medical works—and because it illustrates the agreeable mode of lecturing which the student notices so often in the Medical Schools of Europe.

Respecting the cases that were admitted this week, there were five among the women and three among the men.

Among the women a case of continued fever, a case of rheumatism, a case of bronchitis, and a case of hysteritis. Among the men a case of nephritis and two cases of bronchitis. Among the women there was also admitted a case of pregnancy! When I came to the

hospital on Thursday, I found one of my beds appropriated to a young woman with a large abdomen, who said that her doctor—Dr. Fiddle, had told her she had got the dropsy, and had better come here to be cured.

Now when I was a pupil, I saw a very sharp clever man admit two cases of women with big bellies, and prescribe for them squills, acetate of potash, and other anti-hydropsics; and before the week was out, each of these persons had a little one sucking at her side. However, this would have been a very disagreeable and discreditable circumstance now, in these days of diagnosis, and therefore I condescended (or my physicianship condescended) in the case of this patient, to use mechanical means for the purpose of investigating her state; and I not only inquired whether there was fluctuation or not, as physicians are allowed to do, and ascertained that there was none, but I had her undressed, as I make it a rule in all cases of affection of the trunk, whenever there is a suspicion of organic disease. I believe it is considered by some to be derogatory to the dignity of a physician to use his hands or his ears; but as nature has given us both ears and hands, for one I am very grateful for the gift, and whenever the phenomena of touch or sound occur, I consider them equally worthy of notice as phenomena of sight, or as details given, and despise not the assistance afforded me by the Creator. I therefore mechanically examined the whole abdomen of this young lady, and found there was a considerable tumor of the abdomen, quite hard; and the tumor grew broader and broader upwards, till, at the commencement of the epigastrium, I

felt it well defined, its edge rounded off, and its shape something like a segment of a circle. On looking at the breast, the areola appeared of the darkest brown. All this, of course, made me very suspicious. At one part of the tumor, the upper part, near the right hypochondrium, I found a projection, smooth, firm, and globular, as if a lobule was there. While my fingers were upon it, however, it disappeared—away it went. On applying my fingers a second time, I found it again, but more in the centre; then it receded, and I felt it lower down. While I was feeling it, there gave such a kick that I started and withdrew my hand. The nature of the case was perfectly clear, but I said nothing about it; and asking the maiden how long she had had the dropsy, she replied three months. I asked her if she still menstruated, and she replied that nothing of that kind had happened for ten months. I asked her if she was ever sick, and she replied every day, and all day. I think it very likely, from all this, and what I have seen in other women, that she really had no idea of being pregnant. I believe that many women become with child, and are not at all aware of it; not that they are not aware that they have taken all the proper means for getting into that state, but that they have no idea that these means have taken effect. It is so common for women to indulge, and think no harm can come of it, because so frequently no harm does come, and they perhaps themselves have so long indulged with impunity—it is so common for women to suppose that no harm can come to *them* from it, and not to know that, in these matters, sometimes a very little goes a great way. I know that some are impostors, and come

to the hospital declaring themselves not with child while they know that they are, and protest and pretend they are so virtuous that the thing is out of the question—quite impossible; yet I do believe that many are deceived. This woman, I think, must have been deceived, and for this reason—she told me at once, honestly and frankly, that she was constantly sick, and that she had not menstruated for many months. Now, I think, if she had really wished to deceive, she would not have acknowledged these two circumstances—I think not.

I have been told by gentlemen who practise midwifery, that single women are frequently so little aware of being with child, that they have actually been taken in labor, and yet would not believe their real state. I have been told of women who suffered the pains of labor, and without being at all convinced, and have still persisted that they were not with child. Of course, it would be absurd any longer to attempt deception, and I think such conduct must generally arise from ignorance of their real condition. I think that single women in the family way, have frequently no idea how very easy it is for them to become so. A man cannot be too tender towards the female sex, and I therefore did not reproach her with imposture, nor even declare her state to her in express words. I said nothing more than that she had not got the dropsy, and requested you to listen to the little one's heart, which beat distinctly 120 in a minute, while the mother's pulse was only 76.

This case is interesting particularly on this account: when we applied the stethoscope to the abdomen, low down on the left side, the child's heart was heard distinct-

ly pulsating with a double beat. I myself counted it 120, while the mother's pulse was 76. It was perfectly distinct: there could be no doubt at all about it, and several gentlemen examined as well as myself. I had never heard the foetal heart pulsating before.

Respecting the treatment of this case, the prescription I wrote was, *exeat*—let her depart in peace.

The case is only important as showing the necessity of taking pains to make a careful diagnosis. Any one would suppose that a case of this kind could never occur; but I do recollect, as I have already stated, seeing, when a pupil, two pregnant women admitted, but not examined in bed, and prescribed for at once in the admission-room—ordered diuretics and other remedies for dropsy. Though luckily no harm was done, yet the physician looked exceedingly ridiculous; it occasioned talking and laughing among the pupils, and must have made the patients themselves think, at all events, that the doctor was no conjuror.

IV.

PARIS LETTER.

MANY incidents of interest to the profession will be found in the following letter from a gentleman in Paris, to the Editor of an English periodical.

Paris, Feb. 9, 1831.

SIR,—I have procrastinated, I own, rather unreasonably, and that at a time when *materiel* of more than ordinary interest was at my command: but perhaps this very circumstance were the best excuse I could offer for my delay; one important event following another

in quick succession, and something newer and still more important being always expected : at least this shall be the only excuse I shall occupy your time in offering. I will now proceed, without further apology, straightway to atone for my sins of omission.

The Concours, you are prepared to hear, is at present the great object of attention in Paris : the display opened on Monday afternoon (7th), and the scene of action, which was the large amphitheatre of the Ecole de Medecine, presented a most imposing aspect. At four the business of the court commenced. But I should first briefly notice what principally caught the eye of the observer on entering the place. There was the bust of Ambrose Paré, the first thing that attracted observation, which had not long ago been removed, but was now restored to its proper place, just above the President's chair. This part of the theatre was hung with scarlet cloth from the ceiling to the floor, and on each side were displayed the portraits of many of the old worthies who figured in the professorships of the Faculté. Opposite the chair, and on either side, were placed the benches on which the candidates sat. The judges though, I should mention, were seated with their backs to the vast assemblage of spectators. The whole appearance of the arena, in short, was imposing and solemn in the highest degree. As to the individuals who composed the Court of Examiners, perhaps a more able and justly celebrated set could not have been selected in all France : the names of the President, Deyeux, and the rest of the judges, Desgenettes, Orfila, Alibert, Cruveilhier, Adelon, Richerand, and Moreau, with

those of Leroux and Andral, the two coadjutor-judges, or *suppléants*, are well known all over Europe. The candidates were six in number : MM. Legrand, Person, Donné, Guérard, Pelletan, and Norgue; but M. Norgue has since retired from the field. It was curious to observe the formalities with which the business commenced. M. Andral, as secretary, read the ordinances of the King, and the University regulations relating to the order of the course ; those relating to the Concours for the chair of Physique Medicale, the present object of contention, in particular : then having called over the names of the candidates, he put into their hands a list of the judges, in order that they might protest against or challenge such of them as they might have any fair objection to. They were permitted to retire into an adjoining apartment for the purpose of deliberately considering the list : but they presently returned, and made no challenge. It was then the turn for the judges to retire ; and their object in so doing was to fix upon the question for the written essays, the composition of which engaged the candidates during the next day, from ten till four o'clock. But thus ended the first day of the Concours—nothing positively done—all merely show and ceremony, or little else. I have now lying before me one of the papers issued by the Minister of Public Instruction, containing the official regulations of the Concours : I shall make a few short extracts from it, with your permission. After mentioning that the chairs, which are forthwith to be filled by duly-chosen professors, are those of *Physique Medicale*, *Pathologie Externe*, and Physiology, it simply states that the only qualifications required of can-

didates are that they be in the enjoyment of the common rights of citizens ; that they be at least five-and-twenty years of age ; and lastly, be doctors in medicine or surgery. The trials of skill, and other tests to which they must submit, are then set forth : these are — 1st, That the claims of each candidate to public respect and confidence be discussed by the judges assembled in full court ; their works and services taken into account, and duly appreciated. 2d, That a printed dissertation be laid before the judges, in twenty days after the opening of the Concours ; the subject to be on the general business of the chair contended for, with an account of the plan and method intended to be adopted by the candidate, should he succeed. 3d, That a written reply be given to a question drawn by lot, the question being the same for each candidate, with the same time for writing upon it ; the composition then to be read publicly by each writer before his judges. 4th, That a lecture be delivered, after a day's preparation, upon some matter connected with the chair ; the exact subject to be assigned to the lecturer by lot. And 5th, That another lecture be required after three hours' deliberation, on a subject, as before, determined by lot, and the same for each candidate, heard on the same day ; the lecture to be an hour's length, and delivered without any notes.

You will perceive that they have begun, in the present instance, with the third of these five tests ; the question proposed being, " To expound the theory of vapors formed in vacuo and in common air, and to point out its advantages with respect to practical application." The most remarkable circumstance

connected with this question is, that it is a purely physical one, and that owing, as it is supposed, to the non-medical members of the institute, who form an influential portion of the jury. I cannot possibly conceive what rational objection can be made to the question ; yet I understand it has given much dissatisfaction to most of the *savans* who take an active interest in the proceedings.

Last week we had another grand affair transacted in the same *locale* ; I allude to the distribution of prizes in the Ecole de Medecine, an event about which the Faculté have been more than ordinarily solicitous this year. The regular business of the school was suspended for the day, the great amphitheatre was brilliantly decorated on the occasion, and the successful students were crowned in presence of the Dean, the Professors, a large number of physicians, and a thronged multitude of the pupils belonging to the institution. But what pleased me most was the eloquent and judicious address which M. Andral pronounced at the opening of the ceremony ; and he seemed to inspire all his auditors with similar feelings of pleasure, for he was repeatedly and loudly cheered from the crowded benches. The speaker, after dwelling for a time on the advantages of an establishment which thus called together annually both the teachers of medicine and their pupils, and held out such cheering encouragement to the latter, in the way of filling them with a spirit of emulation and enthusiasm for study, took a short view of the history of the Faculté—praised the *Convention*, but branded the minister who took upon himself the audacious responsibility of destroying by an ordinance what had been properly re-

gulated by law. He next pronounced an eulogium on the late M. Desormeaux, bestowed a brilliant eulogy on the *concours*, which, he said, was entirely due to that prince "whom the free choice of the people had placed on the throne—a prince who had been imbued to a certain extent in our own studies." He concluded by exhorting his auditors to prepare themselves for the bright prospect before them by pursuing their courses diligently, conscientiously,—*peaceably*.

Now, there was nothing in the manner of this little oration that many other men present could not have thrown perfectly into the shade, for M. Andral is strikingly deficient in all the outward graces, and more obvious qualities, which constitute an eminent speaker; but there was an unusual animation about him on the occasion, and his plain little figure, and unaffected utterance, being worked up into something like genuine impressiveness, the general effect which he produced was decidedly of the best sort, tending, as the marks of approbation with which his concluding advice was received evidently showed, most successfully to secure the peace and tranquillity of the medical students of the metropolis.

This brings me to say a few words on the late *affaires* of the Parisian pupils; and I believe I can do so now with far more confidence than I could have been lately justified in doing.

It is now put beyond a doubt, that what the authorities wanted most in the matter of these disturbances was decision; the calm which has ensued since the last decisive demonstration of the Academic Council cannot possibly be attributed to any other cause. The

line of conduct, however, adopted by the council towards the students is worthy of special observation. In the first place the firmness displayed by M. Barthe led immediately to the explosion of the 22d of January, when the riotous scene at the Sorbonne was enacted; it was, indeed, a memorable scene; I shall not be likely soon to forget the proceedings which I that day witnessed—the vast crowd assembled opposite the place of meeting—the threats—the cries and vociferations furiously re-echoed from all quarters—the aggravation of the state of things on the appearance of M. Barthe, as he passed into the council-hall; all this was only to be surpassed by the actual violence of breaking into the building. And so they did. The rage of these deluded young men at length reached such a pitch, that they penetrated into the very hall of the sittings, and would have probably laid violent hands upon the members, but that they had just quitted the spot. The seats were upset, the tables overturned, and the registers flung out of the window. M. Barthe, accompanied by the Procureur-General, had the temerity to speak to the maniacal group, and to attempt to quiet them; but they were soon silenced—mud, eggs, stones, and every convenient missile within reach, were cast at them. The minister narrowly escaped to his carriage, the windows of which were shivered to atoms; and M. Persil was hurried away by one of his friends, after having been struck with a stone. But all this was only the crisis of the fever which had been for some time raging in the body corporate of the students; until this critical exacerbation had taken place, there was but little room for the salutary in-

terposition of any healing measure. It had, however, now occurred ; and no time was lost by the proper advisers to have recourse to the right remedy—a remedy rough indeed, but suited to the rough emergency in which it was to be employed. Examples were made of some of the ringleaders : three of the students were treated with signal rigor, and the rest were suffered to profit by what they observed. The explosion, however—the explosion, I must repeat, was everything : it acted like a charm upon the rioters ; it was by the terror and panic produced by their own final act that they were effectually tranquillized. A complete revolution was the consequence ; and the following document, deposited the very next day in the bureau of the *Faculté*, was signed in the course of two hours with nearly 400 names :—“ *Protest*. The pupils of the School of Medicine, having learned from the journals the scandalous scene which took place at the Sorbonne on Saturday last, and which is attributed to the students, hasten to protest against, and declare how much they disapprove, such disorders. Young men who have always shown themselves the friends of liberty and public order, are not capable of conduct so opposed to their principles.” (The signatures.)

It would be trespassing too much upon your space to enter further into particulars relating to these student-riots : suffice it, that since the occurrence of the crisis just mentioned, nothing has taken place in the slightest degree to disturb the tranquillity of the schools. Murmurings, to be sure, are sometimes perceptible, but they are merely the indications of the subsiding storm.

I perceive from the public journals that Magendie's recent enrolment among the legitimates has created a considerable sensation. It is true that he has arrived at length at a distinguished footing in the Institute—has obtained a *service* in the *Hôtel Dieu*—and has succeeded Recamier in the chair of medicine in the College of France. *Venimus ad summum fortunæ*, as the old satirist has it. How or whether the public will be gainers by the elevation of M. Magendie is to me, and I know it is also to some of the most discerning judges, matter of considerable question. Facts and “old experience” are rather against the positive good of such elevations ; and indeed laying aside all consideration of the politics of M. M., we shall yet be at a loss to determine on what our sanguine hopes of him should rest. I believe his qualifications for a chair in the *Faculté* can be readily summed up by saying, that he is undoubtedly an able physical experimentalist, but he is not a man of very extensive or varied information—he does not by any means possess an easy and elegant mode of expressing himself—and by those who know him best, he is generally allowed to be, as a professor, one of the *très-médiocres*.

Amusat, at a late meeting of the Académie des Sciences, read another paper on the torsion of arteries. Magendie and Boyer were the reporters pitched upon to give an account of it to the Académie : but old Boyer amused me a good deal by the warmth with which he declined having anything to do with the business. “My opinions,” said he, “are well known with regard to M. Amusat's *discovery* ; they are fixed and unalterable: have the goodness to accept my resigna-

tion of the duty of reporting on the subject." M. Adelon did not persist in the nomination, but without further delay appointed Baron Dupuytren. On turning to the Baron I could perceive that he was seriously annoyed by the arrangement. When will these petty bickerings, prejudices, and jealousies, among men of science, have an end? I have many curious things to tell you about the Academicians; but I fancy you will think I have covered paper enough in the present letter. I shall with that impression close it—only subscribing myself as ever,

Yours faithfully,

ANGLAIS.

MEDICAL JOURNAL.

BOSTON, APRIL 26, 1831.

INTESTINAL WORMS.

THE mode of production of these singular inmates in the human system, seems to have been the subject of as much inquiry to physiologists, as the means of expelling them to the medical practitioner. The most generally received opinion at the present time doubtless is, that intestinal worms are generated from ova conveyed into the stomach or intestines, either in the air or the food, and there finding a proper nidus in which to be awakened into existence. To this view of the subject, however, there are serious objections. In the first place, these ova have not been demonstrated in a separate state either within the human body or without it. They have not been detected in the atmosphere; they have not been discovered in articles of food; nor have they been found

in examining the human intestines after death. No form of matter, except the bodies of the entozoa themselves, has been proved to contain them. This fact, then, is *prima facie* evidence against their existence; since, in the terms of an ancient axiom, "*de non apparentibus, saen existentibus, eadeo est ratio.*"

Again, it is not easy to conceive why these ova, if real, should not be hatched elsewhere than in the intestines, under the common influences of warmth and rest; or, even if something else is wanting, why that something may not sometimes be furnished in a different nidus than that afforded by the intestinal parietes. Some physiologists, apparently feeling the force of this objection, have urged, in reply to it, that many animals undergo metamorphoses which make it difficult to recognise them at the successive stages of existence. Such is confessedly the case with those of the insect tribe which assume a transitory or chrysalis state; and a similar remark has been made respecting the changes produced in the growth of the common frog. After all, however, these animals, when compared with the portion of the animated kingdom which is known, scarce form more than a few exceptions. Did any species or genera allied to the entozoa exhibit such changes, it would at once render the opinion more probable in regard to them, and furnish some analogy by which the naturalist might be guided in determining under what disguise to seek them. But, in truth, the explanation thus advanced does not

meet the whole difficulty of the case. If the same animals which are found within the body, were capable of attaining maturity without it, their identity could not fail to be easily recognised, however numerous the changes pertaining to their history.

But there is another difficulty in admitting the existing theory in relation to this subject. How does it happen, it may be asked, that the usual varieties of intestinal worms are so few in number? Surely if the atmosphere were loaded with ova in the manner supposed, many others must find their way into the system, equally capable with these of receiving an animate existence. If it is still answered, that these alone find there an appropriate nidus, it will be necessary to admit that the circumstances which constitute this are common to the human system under great varieties of circumstances; for while individuals the most diverse in habits of life, constitution, and country, are thus affected, the varieties of the disease continue to be maintained within the same narrow limits. In other words, the peculiar morbid state of the stomach seems to be *everything* in its production, while the nature of the ova introduced is a circumstance altogether of secondary importance.

Opposed to the doctrine we have just been considering, is that which rejects the idea of the extraneous origin of entozoa, and regards them as the product of a spontaneous growth within the cavity in which they are found. The author of the most complete treatise we possess on the subject of worms, Charles

Osmund Rudolphi, is a strong advocate for this mode of explaining their production. He considers the origin of worms in the same light as that of infusory animals, and both to be independent of any other source than the portions of matter which afford them an abode. The only condition necessary for the production of worms, according to this author, is, that a portion of the intestinal cavity should be in a diseased state, and therefore imperfectly assimilated, as he expresses it, to the remainder of the system. Any greater degree of disorganization than this, would, in his opinion, render the parts unfit for the propagation of worms, and adapt them for the production of a different order of beings. Rudolphi confidently asserts, that he has seen the heads of *tæniæ* without trunks, and scarce to be distinguished from the villous coat of the intestines, and has traced them from this incipient state through all their subsequent development to perfect maturity.

Against the view thus taken of this subject, may be urged all the arguments which go to disprove equivocal generation under any circumstances. To consider all these would lead us too much into details inconsistent with the design of these remarks. What is certain, however, is, that in a large proportion of the plants, and nearly all the animals, which exist, some structure can be discovered subservient to the continuance of their species—becoming, however, more obscure as the remaining structure of the plant or animal becomes less complicated.

On this observation, principally, are founded the following conclusions, which must be acknowledged at least to be sufficiently liberal for the premises. 1. That where the organs of reproduction cannot be discovered, as is the case with the cryptogamous plants and some animals, these must be presumed from analogy to exist, but from their smallness or other causes to escape detection. 3. That animals or plants possessing these organs, are propagated by means of them, and in no other mode. 3. That where a plant or animal is found whose origin is not evident, however remote the location in the one case from any other plant of the same species, and however difficult of access, and unsuited to the deposition of an ovum in the other, the inference must in both cases be, that the hand of man or the operation of the elements must have conveyed the offspring of their respective parents to the places where they are found, and in which, by the aid of the requisite circumstances, they have both become instinct with the principle of animal or vegetable life. Hence the axiom of *omne vivum ex ovo*, which is generally admitted by physiologists in its application to both the departments of natural history.

We have said that these inferences were somewhat extensive for the premises assumed. It should be remembered, however, that the objections to spontaneous generation do not rest solely on its want of analogy with what we witness of the order of creation around us. There are considerations derived from the lan-

guage of Scripture on this subject, which have induced wise and prudent men to be cautious in admitting a doctrine which would tend in any measure to unsettle religious faith. The remark has been made, though in a style perhaps not well suited to the dignity of the subject, that since man himself is but a worm, were the doctrine of spontaneous generation to be once admitted, the fables of the dragon's teeth and the stones of Deucaleon may be revived as subjects of serious consideration, and constitute the bases of the systems of future cosmogonists. Whether apprehensions of this sort be well founded or not, the feeling which prompts them is certainly to be respected; and until we venture to take that ground in our own science, which some geologists have done in theirs, and to discuss contested points without any bias from this source, the present question must be regarded as one which a paramount authority has already prejudged.

BRITISH NAVAL SURGEONS.

By a recent act of the British Admiralty, Naval Surgeons are excluded from the King's levees. This exemption has excited much commotion among the excitable and always excited Faculty of Great Britain, and given rise to scenes of riot which the popular press has not been backward in describing. It appears to us, from all the accounts we have seen of the business in the various medical and other papers, that this exclusion has arisen from a mistake which will be speedily rectified by the Government, unless the Faculty,

by their conduct in the premises, shall render expedient the permanence of a measure which was adopted without due consideration of the full extent of its operation.

It appears that all "officers of the navy" have heretofore been admitted to the levees of his Majesty. Among these "officers" are the gunner, boatswain, carpenter, &c.; persons whose habits are not perfectly congenial with those of the king's courtiers, and whose presence on great occasions was a sore wound to John Bull's national pride. In order to remove this source of mortification, it was ordained that "warrant officers" of the navy should not be admitted to court. Now it so happens, that the surgical staff are not *commissioned*, but act under *warrants*, and of course they come within the reach of the above-mentioned ordinance. But as there is no apparent reason why these gentlemen should be thus disgraced, it will probably turn out, that this effect was overlooked, and that speedy measures will be taken to restore them to their ancient prerogative, and their professional brethren to their sober senses and a reasonable degree of peace and quietude.

PRIZE ESSAY ON CHOLERA MORBUS.

WE stated, not long since, that the Russian Government had offered a premium for the best essay on the dreaded epidemic of that portion of the world. Here follows the *official notice*, by which it appears that if any subscriber to this Journal has

been induced, by our former *unofficial* notice, to strike out any brilliant thoughts, or record any grave experience or experimental researches, in the hope of winning the 5000 dollars, he may now lay aside his hopes and his pen together, fold up his sheets, and send them forthwith for a place in our hebdomadary. Nor should he allow those hopes to be supplanted by any feelings of anger at the neglect, or pity for the ignorance of a Sovereign who has apparently slighted the American Faculty, in this exclusive call for professional aid. Little of much practical value could be expected from physicians, however learned, whose lives and investigations have been spent at so great a distance from the theatre of the ravages of this fatal pestilence. Let him rather think of the poor Frenchman, whose claims to the respect of the Autocrat have been so slighted, that not only is he not allowed to become a competitor for the prize, but his language even, the language of Desgenettes, of Magendie, and of Dupuytren, the court language of St. Petersburg itself, is made sharer in the exclusion. The following is the "*official notice from the Russian Government.*"

The epidemic disorder known under this name, has of late years committed the most frightful havoc among various nations in Asia. Within the last fifteen months, this awful scourge of human life has made its appearance in several provinces of the Russian Empire with undiminished severity. No medical work hitherto published on this fatal malady has been found satisfactory, nor have the suggestions contained in such works succeeded in arresting

its devastating course, which, on the contrary, becomes every day more extensive, and seems to threaten the whole of Europe.

Moved by a deep feeling of humanity, the Imperial Government of Russia deem it right to call the attention of the medical profession in Russia, Germany, Hungary, Italy, England, Sweden, and Denmark, to this vitally important subject, and to propose to them to forward to the said government, treatises on the cholera morbus, which shall embrace the following points:—

1st. A clear and detailed account of the nature of the disease.

2d. A statement of causes which give rise to it.

3d. A description of its mode of propagation.

4th. A demonstration, by the means of exact and faithful experiments, of its being communicable from one individual to another, if such be the fact.

5th. An indication of the measures to be adopted for self-preservation against its contagion, should the disease prove contagious.

6th. Of the means best calculated to insure a recovery.

Such Treatises or essays may be written in the Russian, Latin, German, English, or Italian languages, and directed to the "Conseil de Médecine" (Medical Board) at St. Petersburg, until the 1—13th September, 1831. The name of the author is to be forwarded in a separate envelope.

The author of the best treatise, who shall have fully complied with all the above conditions, will be rewarded, by the Imperial Government of Russia, with a sum of twenty-five thousand roubles in bank paper, amounting to about eleven hundred pounds Sterling.

STETHOSCOPIC SIGNS OF PREGNANCY.

In another part of this number, we have referred to this mode of diag-

nosis, and the subject will be still further illustrated by the following notice of the experiments of Dr. Ferguson, of Dublin, for which we are indebted to the *N. A. Med. Journal* of the present month.

Dr. Ferguson has published an account of his success in detecting pregnancy by means of the stethoscope. He says he has never in a single instance been mistaken: and in one instance only of undoubted pregnancy, was unable to detect the stethoscopic signs. Two distinct sounds may be detected; one arising from the pulsations of the foetal heart, the second from the placenta, which Dr. F. refers to the passage of blood in the arteries connecting the placenta to the uterus. The placental noise may generally be found in one of the iliac regions, and in the same subject is always found in the same place. It may be mistaken for the pulsations of the iliac arteries, but this last will be heard perhaps in all cases on both sides, and can only be perceived in the groin, while the noise produced by the placenta is heard over some space, perhaps three or four inches square. The foetal heart may often be heard in every region of the abdomen. Although it and the placenta are sometimes heard on the same side, and even in the same spot, yet usually they are on opposite sides; the foetal heart is generally perceived in one of the iliac regions; but, unlike the placenta, it is not always heard in the same place, in the same individual—but it does not vary much from the point where first heard. Its double beat is well marked; and the frequency of its pulsations is, says Dr. F., always much greater, often double that of the mother's.

In the *Dublin Hospital Reports*, this subject is also treated of by Mr. Kennedy, who agrees with Dr. Ferguson, that the placental thrill is owing to the transmission of blood from the arteries of the mother to the placenta. He appears, however, to

consider this thrill as important in detecting pregnancy in its early stages, before quickening, and before the pulsation of the heart can be recognised. He has noticed the placental thrill as early as the 10th week, and hence, in many cases, this diagnostic mark of pregnancy becomes extremely valuable,—cases to which particular reference is unnecessary.

Professional.—There are, in the State of New York, five thousand five hundred and ninety-one professional persons—viz., 1742 practising attorneys; 1300 clergymen; 2549 physicians.

Davy's Passion for Angling, illustrating the Peculiarities both of his Mind and his Attire.—Hitherto his passion for angling has only been noticed in connexion with his conversation and letters; I shall now present to the reader a sketch of the philosopher in his fishing costume. His whole suit consisted of green cloth; the coat having sundry pockets for holding the necessary tackle: his boots were made of caoutchouc, and, for the convenience of wading through the water, reached above the knees. His hat, originally intended for a coal-heaver, had been purchased from the manufacturer in its raw state, and dyed green by some pigment of his own composition; it was, moreover, studded with every variety of artificial fly which he could require for his diversion. Thus equipped, he thought, from the color of his dress, that he was more likely to elude the observation of the fish. He looked not like an inhabitant of

the earth, and yet was on't;—nor can I find any object in the regions of invention with which I could justly compare him, except perhaps with one of those grotesque personages who, in the Farce of the Critic, attend Father Thames on the stage, as his two banks.

I shall take this opportunity of stating, that his shooting attire was equally whimsical: if, as an angler, he adopted a dress for concealing his person, as a sportsman in woods and plantations it was his object to devise means for exposing it; for he always entertained a singular dread lest he might be accidentally shot upon these occasions. When upon a visit to Mr. Dillwyn, of Swansea, he accompanied his friend on a shooting excursion, in a broad-brimmed hat, the whole of which, with the exception of the brim, was covered with scarlet cloth.

Notwithstanding, however, the refinements which he displayed in his dress, and the scrupulous attention with which he observed all the minute details of the art; if the truth must be told, he was not more successful than his brother anglers.

THE remarks of ANATOMICUS are altogether too pointed and vulgar for insertion. This work is designed for the promotion of medical knowledge, and not for the gratification of personal animosities.

Whole number of deaths in Boston the week ending April 15th, 23. Males, 9—Females, 14. Stillborn, 1.

Of consumption, 4—brain fever, 1—fever, 1—chronic catarrh, 1—liver complaint, 1— inflammation on lungs, 1— inflammation on brain, 1—croup, 3—dropsy, 1—bleeding, 1—unknown, 1—hooping cough, 1—suicide, 1—smallpox, 1—old age, 1—debility, 1—infantile, 1.

THE BOSTON MEDICAL AND SURGICAL JOURNAL

IS PRINTED AND PUBLISHED EVERY TUESDAY, BY

CLAPP & HULL,

At 184 Washington Street, corner of Franklin Street, to whom all communications must be addressed, POST PAID. Price three dollars per annum, if paid in advance, three dollars and a half if not paid within three months, and four dollars if not paid within the year. The postage for this is the same as for a newspaper.